

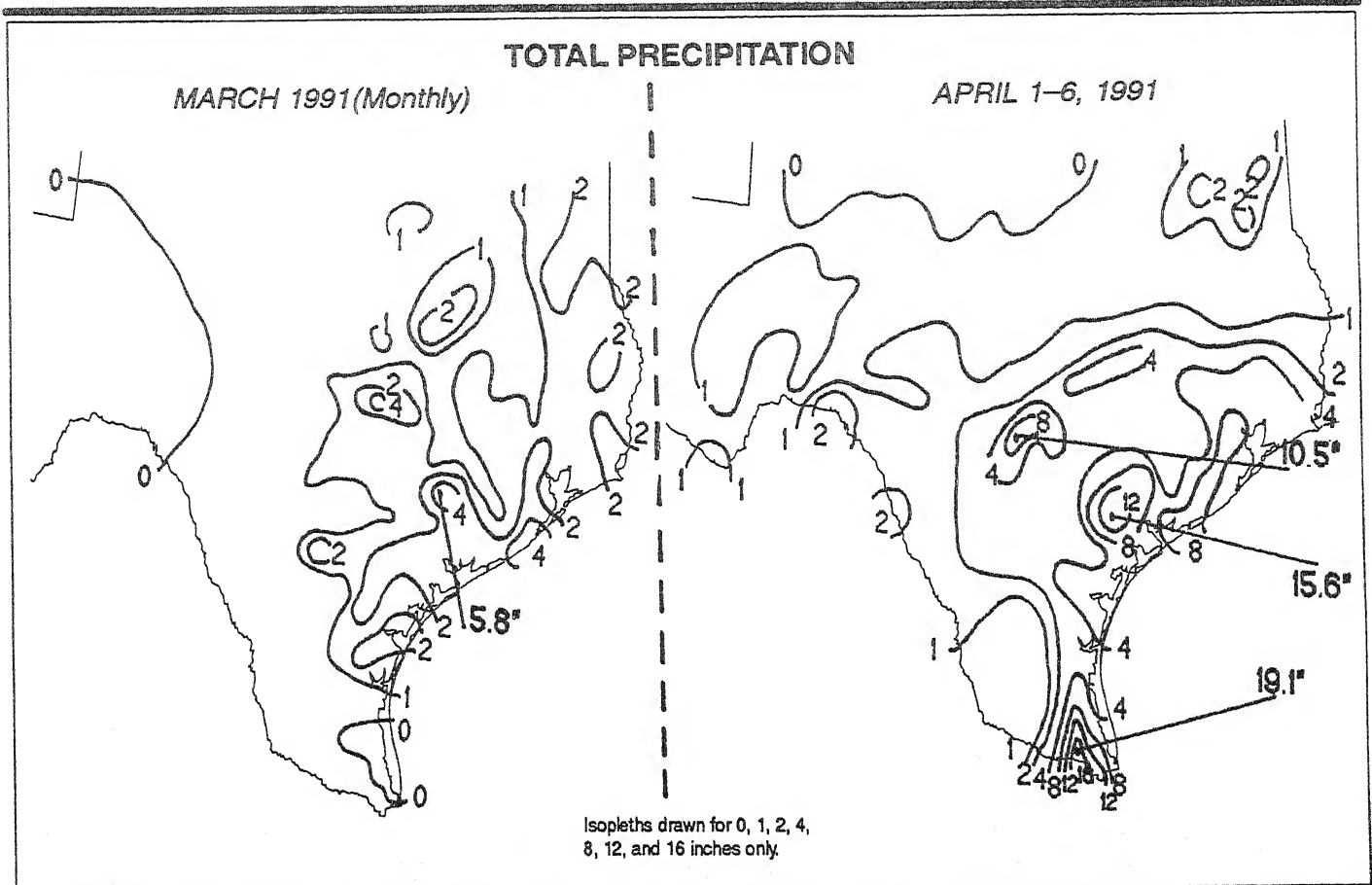
CONTAINS:
MARCH 1991
UNITED
STATES
CLIMATE
SUMMARY

WEEKLY CLIMATE BULLETIN

No. 91/14

Washington, DC

April 6, 1991



In addition to the heavy, welcome precipitation across California, March 1991 also brought slightly above normal precipitation to portions of southeastern and south-central Texas, where 1.5 to 3.25 inches normally fall (See United States Monthly Climate Summary). During the first six days of April, however, the southern tip of a cold front stalled across the region and combined with an upper-level disturbance moving eastward from the southern Rockies to generate inundating severe thunderstorms. Up to 19.1 inches of rain deluged extreme southern Texas, most of which fell within 24 hours. The incessant downpours produced widespread urban flooding, sent a number of rivers out of their banks, and caused the evacuation of several lowland locations (See United States Weekly Climate Summary).



UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE-NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER



WEEKLY CLIMATE BULLETIN

This Bulletin is issued weekly by the Climate Analysis Center and is designed to indicate, in a brief concise format, current surface climatic conditions in the United States and around the world. The Bulletin contains:

- *Highlights of major climatic events and anomalies.*
- *U.S. climatic conditions for the previous week.*
- *U.S. apparent temperatures (summer) or wind chill (winter).*
- *U.S. cooling degree days (summer) or heating degree days (winter).*
- *Global two-week temperature anomalies.*
- *Global four-week precipitation anomalies.*
- *Global monthly temperature and precipitation anomalies.*
- *Global three-month precipitation anomalies (once a month).*
- *Global twelve-month precipitation anomalies (every three months).*
- *Global three-month temperature anomalies for winter and summer seasons.*
- *Special climate summaries, explanations, etc. (as appropriate).*

Most analyses contained in this Bulletin are based on preliminary, unchecked data received at the Climate Analysis Center via the Global Telecommunications System. Similar analyses based on final, checked data are likely to differ to some extent from those presented here.

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GLOBAL CLIMATE HIGHLIGHTS

Major Climate Events and Anomalies as of April 4, 1992

1. Western North America:

PROLONGED WARM SPELL CONTINUES.

Temperatures soared to 25°C in southern British Columbia as departures reached +9°C in Alberta and +7°C in Montana. Parts of southwestern Canada and northwestern United States have experienced unseasonably mild weather since early December [17 weeks].

2. Southern United States:

MORE HEAVY RAINS.

Thunderstorms inundated some locations in Texas with up to 90 mm of rain. San Antonio established a new March record as the monthly total reached 155 mm. With six-week moisture surpluses approaching 165 mm in spots, any additional rain will become runoff, and the risk of serious flooding remains high [25 weeks].

3. Ecuador and Peru:

FLOODING CAUSED BY EXCESSIVE RAINFALL.

Up to 215 mm of rain deluged parts of Ecuador and Peru, and press reports indicate that significant flooding afflicted parts of the region. Up to 300 mm more than normal precipitation has fallen since mid-February [4 weeks].

4. Southern Europe:

RAINS BRING RELIEF.

Many locations on the southern and western Iberian Peninsula received 50 to 130 mm of rain. Abundant rainfall (25 to 60 mm) also dampened central France, but generally under 25 mm was measured in eastern Spain and southern France [Ending at 14 weeks].

5. Middle East:

TEMPERATURES APPROACH NORMAL.

Near normal temperatures returned to most of the region; however, parts of the Arabian Peninsula were still significantly colder than nor-

mal, and slightly below normal readings prevailed across northern Africa [Ending at 19 weeks].

6. Southern Africa:

HOT AND DRY CONDITIONS PERSIST.

An increasingly severe drought continues to grip the region. Press reports indicate that this may be one of the worst dry spells to afflict the region in over a century. Temperatures averaged around 4°C above normal from the central Transvaal northward [10 weeks]. Up to 25 mm of rain fell on southeastern South Africa, but little or no precipitation was reported elsewhere. Six-week precipitation deficits of 100 to 200 mm continued to plague many areas, with the largest shortfalls reported in Mozambique and South Africa [17 weeks].

7. Sri Lanka and Southern India:

STILL DRY.

Little or no precipitation was again reported in the region as moisture deficits since mid-February reached 145 mm [9 weeks].

8. Eastern China, Taiwan, Korea, and Western Japan:

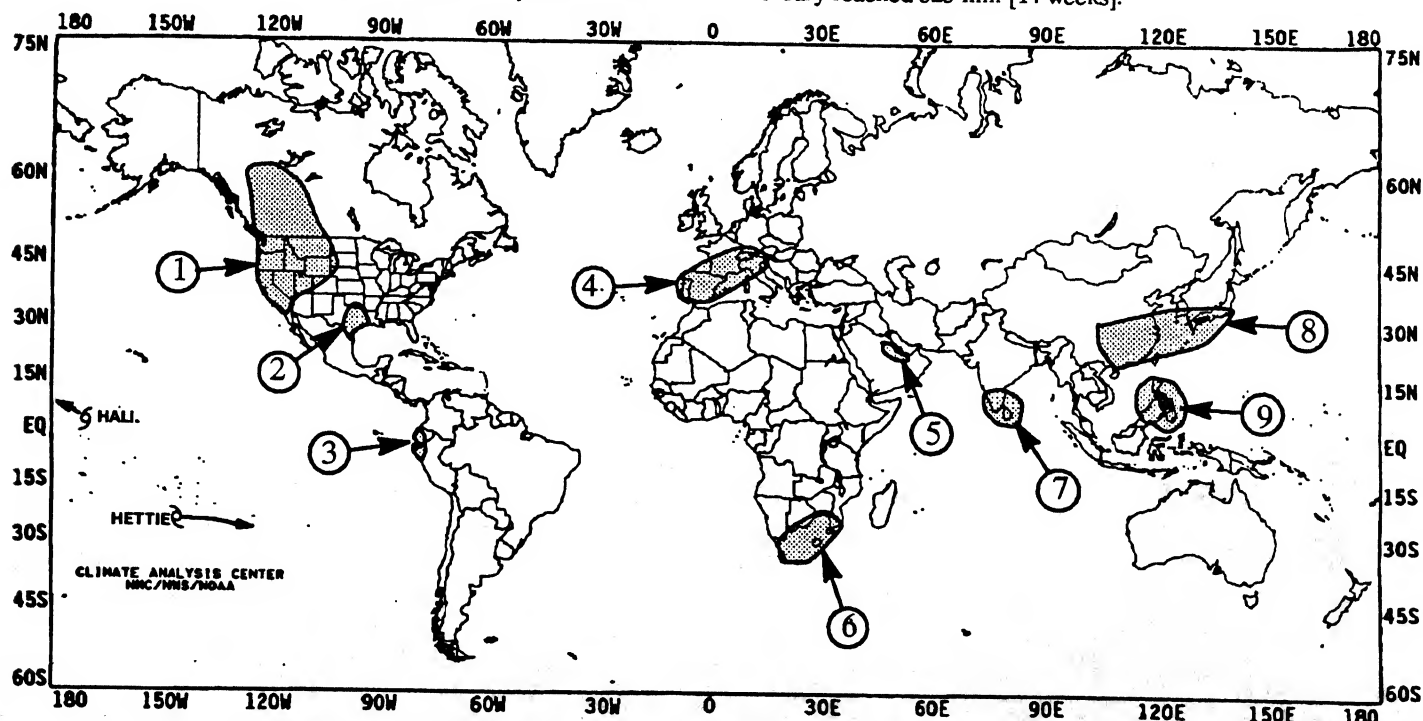
RAINS INUNDATE REGION AGAIN.

Another week of torrential rains caused flooding as many locations in eastern Guangdong and southern Fujian provinces received 100 to 260 mm of rain. Six-week moisture excesses in southern China approached 300 mm. Heavy rains also drenched Japan with up to 220 mm while Taiwan received nearly 160 mm in spots [9 weeks].

9. Philippines and Northern Borneo:

DRYNESS PERSISTS.

A few showers dumped 25 to 50 mm of rain on central Luzon, but generally less than 20 mm was reported. Rainfall shortages since mid-February reached 325 mm [14 weeks].



EXPLANATION

TEXT: Approximate duration of anomalies is in brackets. Precipitation amounts and temperature departures are this week's values.
 MAP: Approximate locations of major anomalies and episodic events are shown. See other maps in this Bulletin for current two week temperature anomalies, four week precipitation anomalies, long-term anomalies, and other details.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF MARCH 29 – APRIL 4, 1992

Winter-like weather hung on for a third consecutive week across much of the eastern U.S. More than three dozen daily record lows were established from the Mississippi Valley to the Atlantic Coast as sub-freezing temperatures and bitter wind chills dipped well into the Deep South and across northern Florida (Figure 1). The mercury plunged to 26°F at Athens, GA Friday morning, yielding an April record. In addition to the cold weather, heavy snow blanketed parts of the Appalachians and Northeast. Up to 18 inches buried Crawford Notch, NH while nearly a foot blanketed Woodlawn, VA. Heavy snow was not confined to the East, however; nearly a foot of snow covered portions of the central and southern Rockies. Elsewhere, unseasonably warm conditions dominated the Pacific Northwest and the northern Rockies and High Plains. Temperatures topped 80°F as far north as Montana, and more than three dozen record daily highs were established from Washington to South Dakota. Meanwhile, strong thunderstorms battered parts of the Southwest and Deep South. Heavy rain, hail, and strong wind gusts pounded parts of Nevada, Texas, and Florida. A rare tornado touched down in Las Vegas, NV, damaging three homes, while heavy rains caused flash floods, closing several roads. Farther east, strong thunderstorms generated more than an inch of rain in southern Texas and northern Florida. More than seven inches of rain inundated Annette Island, AK while bitter cold gripped the central sections of the state. Readings plunged to near -40°F at a few locations.

The week began with a low in the middle Mississippi Valley and a trailing cold front across the southern Plains. Strong thunderstorms erupted as the front pushed through southern Texas, spawning a tornado near San Antonio, TX. The low tracked northeastward, eventually moving off the Atlantic Coast, while the front through the Deep South generated more severe weather from Alabama to Florida. Winds gusted to over 60 mph in central Florida. Elsewhere, heavy snow blanketed northern New Hampshire while a storm system moved through southern California and into the Southwest, generating severe weather and heavy rains in southern Nevada.

The month of April commenced with wintry conditions in the East while abnormal warmth covered the Pacific Northwest and northern Rockies. Numerous daily record lows were observed from Missouri to Florida as freezing temperatures engulfed the Deep South and south

Atlantic. Farther north, a fast-moving storm system trekked across the Ohio Valley and mid-Atlantic on Saturday, dumping heavy snow on the central Appalachians, while unusually warm and relatively tranquil conditions prevailed across the northwestern quarter of the country. Highs soared above 80°F from Oregon to South Dakota as numerous daily record highs were established. The unusually mild conditions triggered snow-melt flooding near Alamosa, CO, forcing the closure of some roads.

According to the River Forecast Centers, the greatest weekly precipitation totals (more than 2 inches) were limited to a few locations in southern Texas, the Ohio Valley, the Southeast, the Southwest, extreme southeastern Alaska, and the western Hawaiian Islands (Table 1). Light to moderate amounts were recorded across the eastern third of the nation, the southern two-thirds of the Mississippi Valley, the southern half of the Great Plains, the central and southern Rockies, the Southwest, most of California, the western halves of Washington and Oregon, extreme southern Alaska, and the remainder of Hawaii. Little or no precipitation fell on the upper Midwest, the northern half of the Great Plains, the northern Rockies, the Great Basin, and the remainder of Alaska.

Unseasonably warm weather enveloped most of the western half of the nation again this week, with weekly departures of +10°F to +12°F observed in the Northwest, the northern and central Intermountain West, and the northern Rockies (Table 2). Departures between +3°F and +9°F were common from the Dakotas southwestward to southern California. In Alaska, mild conditions were limited to extreme southeastern and northern locations. Weekly departures reached +6°F at Barrow.

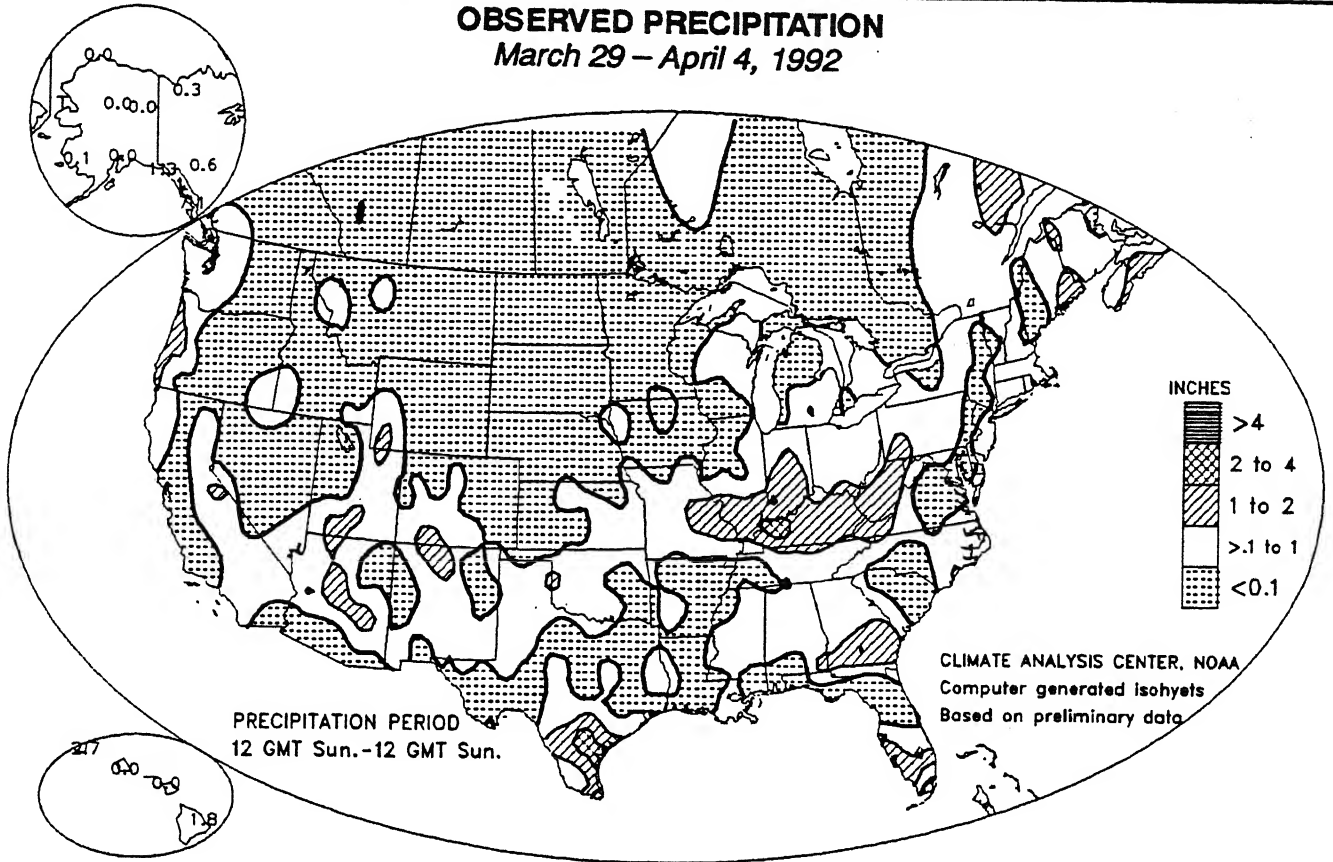
Unusually cold conditions gripped the eastern half of the country, and the southern Plains and Rockies (Table 3). Weekly departures between -10°F and -13°F were recorded in the central Appalachians, eastern sections of the Ohio Valley, and a couple of locations in the Rio Grande Valley. Departures of -3°F to -9°F were prevalent from the Northeast southward to southern Florida, across the remainder of the Ohio Valley, the Tennessee and Mississippi Valleys, and parts of the southern Plains. In Alaska, colder than normal conditions gripped most of the state with weekly departures to -8°F observed at Bettles.

**TABLE 1. SELECTED STATIONS WITH 1.25 OR MORE INCHES OF PRECIPITATION
DURING THE WEEK OF MARCH 29 – APRIL 4, 1992**

<u>STATION</u>	<u>TOTAL</u> <u>(INCHES)</u>	<u>STATION</u>	<u>TOTAL</u> <u>(INCHES)</u>
ANNETTE ISLAND, AK	7.14	CORPUS CHRISTI NAS, TX	1.44
KINGSVILLE NAS, TX	2.96	ST. LOUIS, MO	1.43
LIHUE, KAUAI, HI	2.72	FT. MYERS, FL	1.39
JACKSON, KY	1.77	LAS VEGAS/NELLIS AFB, NV	1.34
HILO, HAWAII, HI	1.76	SAN ANTONIO/RANDOLPH AFB, TX	1.33
CORPUS CHRISTI, TX	1.74	LAS VEGAS, NV	1.31
MT. WASHINGTON, NH	1.60	YAKUTAT, AK	1.31
BELLEVILLE/SCOTT AFB, IL	1.57	BROWNSVILLE, TX	1.27
EVANSVILLE, IN	1.53		

OBSERVED PRECIPITATION

March 29 – April 4, 1992



DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)

March 29 – April 4, 1992

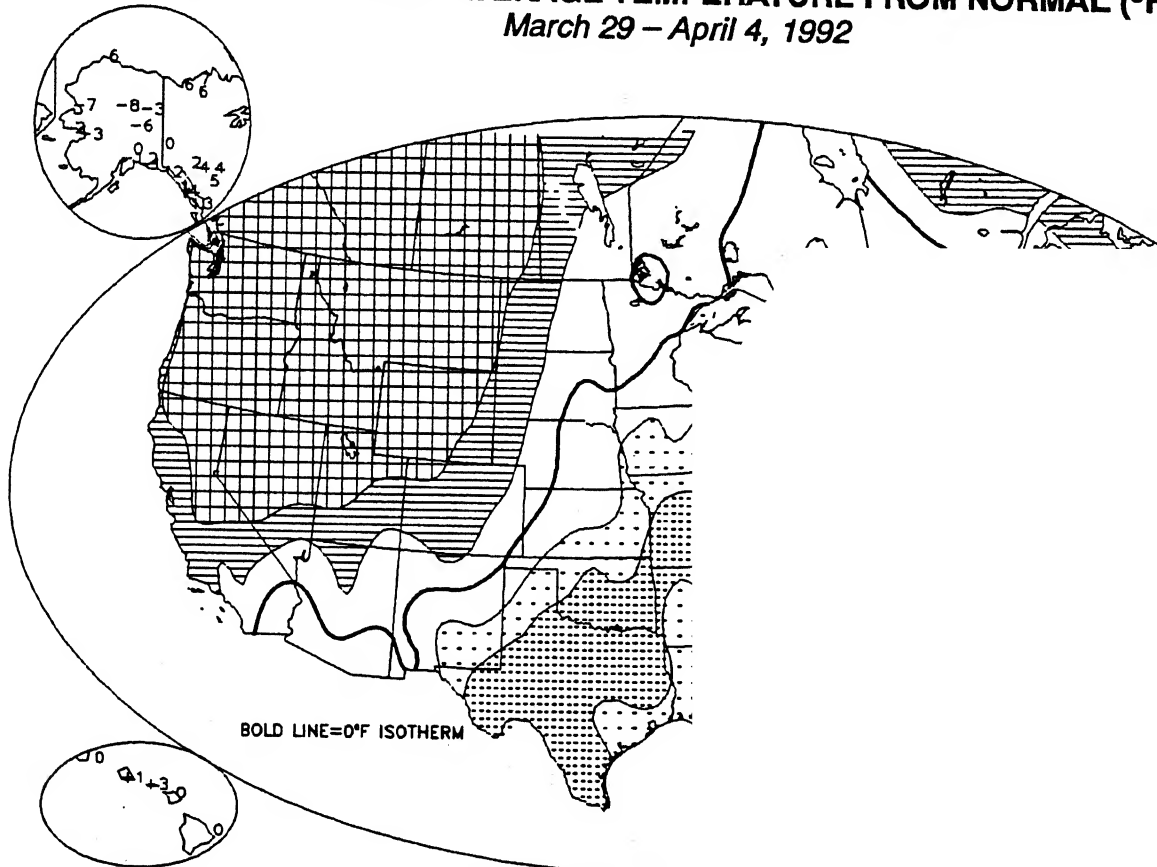


TABLE 2. SELECTED STATIONS WITH TEMPERATURES AVERAGING 9.0°F OR MORE ABOVE NORMAL FOR THE WEEK OF MARCH 29 – APRIL 4, 1992

<u>STATION</u>	<u>DEPARTURE</u> (°F)	<u>AVERAGE</u> (°F)	<u>STATION</u>	<u>DEPARTURE</u> (°F)	<u>AVERAGE</u> (°F)
BOZEMAN, MT	+12.2	47.6	CODY, WY	+10.4	48.8
HELENA, MT	+12.0	49.3	BLUE CANYON, CA	+10.2	50.5
BUTTE, MT	+12.0	44.1	SALT LAKE CITY, UT	+10.1	55.1
STAMPEDE PASS, WA	+11.8	44.1	PORTLAND, OR	+9.9	57.9
BOISE, ID	+11.7	56.7	WINNEMUCCA, NV	+9.8	51.5
BURLEY, ID	+11.3	53.0	POCATELLO, ID	+9.7	50.0
BILLINGS, MT	+11.2	50.6	MT SHASTA, CA	+9.5	52.3
LANDER, WY	+11.1	48.4	GREAT FALLS, MT	+9.4	46.7
CUT BANK, MT	+11.0	44.1	LEWISTON, ID	+9.3	55.8
IDAHO FALLS, ID	+10.9	49.1	MILES CITY, MT	+9.3	47.9
SHERIDAN, WY	+10.9	48.5	GLASGOW, MT	+9.1	45.3
LEWISTOWN, MT	+10.9	44.9	BURNS, OR	+9.0	48.6
LOVELOCK, NV	+10.8	55.4	SEXTON SUMMIT, OR	+9.0	48.4
RENO, NV	+10.6	53.9			

TABLE 3. SELECTED STATIONS WITH TEMPERATURES AVERAGING 9.0°F OR MORE BELOW NORMAL FOR THE WEEK OF MARCH 29 – APRIL 4, 1992

<u>STATION</u>	<u>DEPARTURE</u> (°F)	<u>AVERAGE</u> (°F)	<u>STATION</u>	<u>DEPARTURE</u> (°F)	<u>AVERAGE</u> (°F)
ELKINS, WV	-13.4	32.2	BRISTOL, TN	-9.9	41.9
CHARLESTON, WV	-12.9	38.0	MACON, GA	-9.9	51.5
BLUEFIELD, WV	-12.6	35.7	ZANESVILLE, OH	-9.8	36.0
HUNTINGTON, WV	-12.3	39.1	COLUMBUS, OH	-9.8	36.5
PARKERSBURG/WOOD CO, WV	-12.0	37.3	ROANOKE, VA	-9.8	41.9
BECKLEY, WV	-11.6	35.1	HUNTSVILLE, AL	-9.5	47.6
DAYTON, OH	-10.9	35.4	AKRON, OH	-9.4	33.9
LAREDO, TX	-10.8	62.1	CINCINNATI, OH	-9.4	39.1
MORGANTOWN, WV	-10.4	37.1	CHATTANOOGA, TN	-9.4	46.3
JACKSON, KY	-10.2	41.5	CROSSVILLE, TN	-9.3	41.4
KNOXVILLE, TN	-10.1	45.1	LEXINGTON, KY	-9.1	41.0
MANSFIELD, OH	-10.0	33.3			

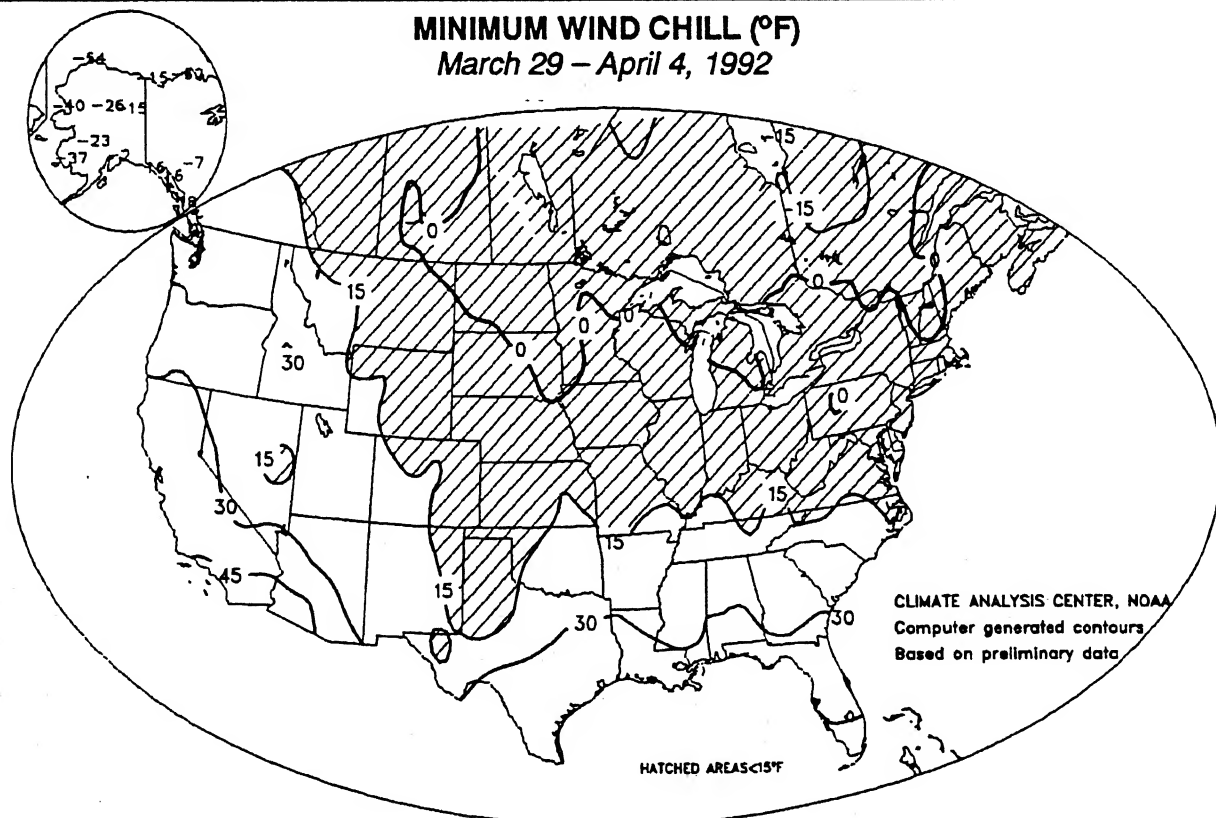
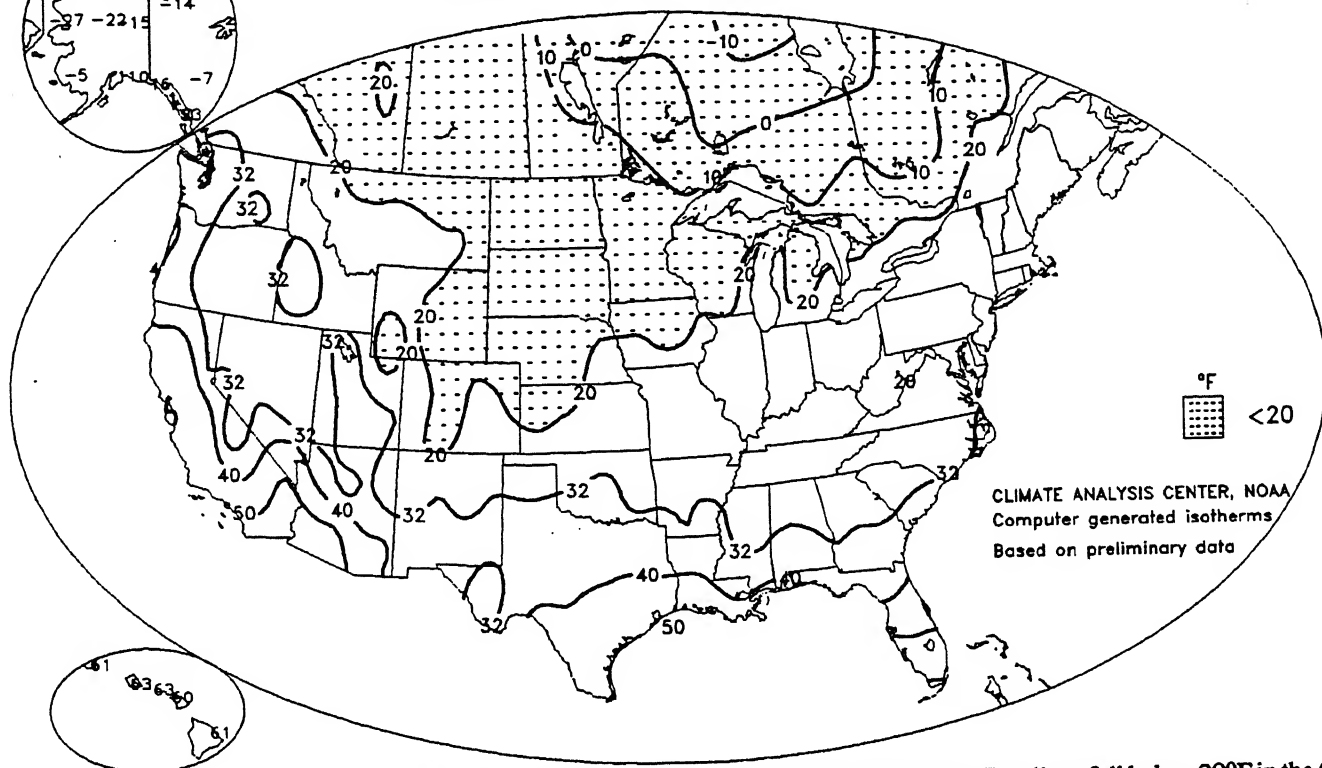


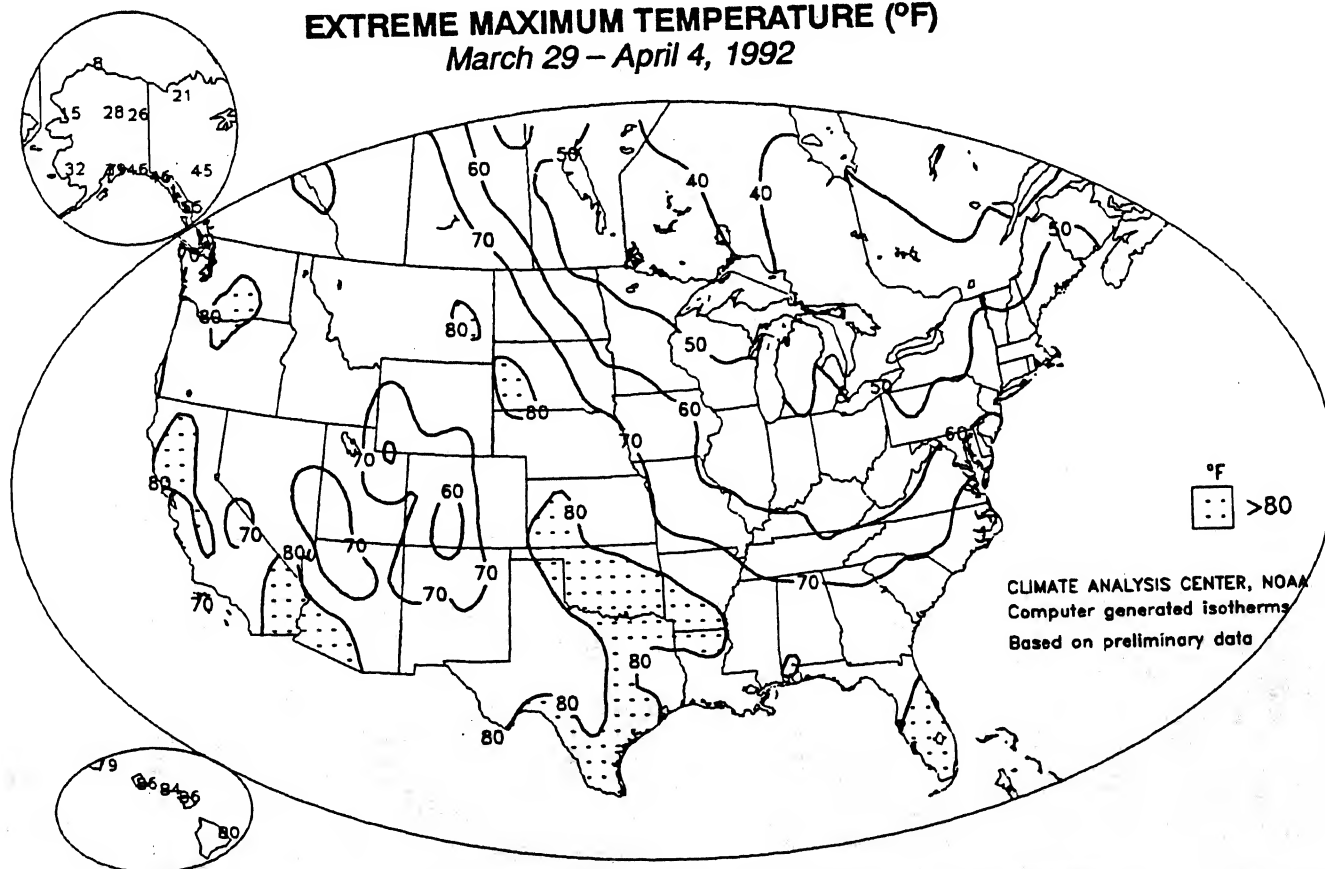
FIGURE 1. Gusty winds accompanied unseasonably cold air in the Northeast and Great Plains, allowing wind chills to drop below 15°F as far south as the panhandle of Texas and northern North Carolina. Wind chills dropped below zero in the northern Great Plains and the Great Lakes region.

EXTREME MINIMUM TEMPERATURE (°F) **March 29 – April 4, 1992**



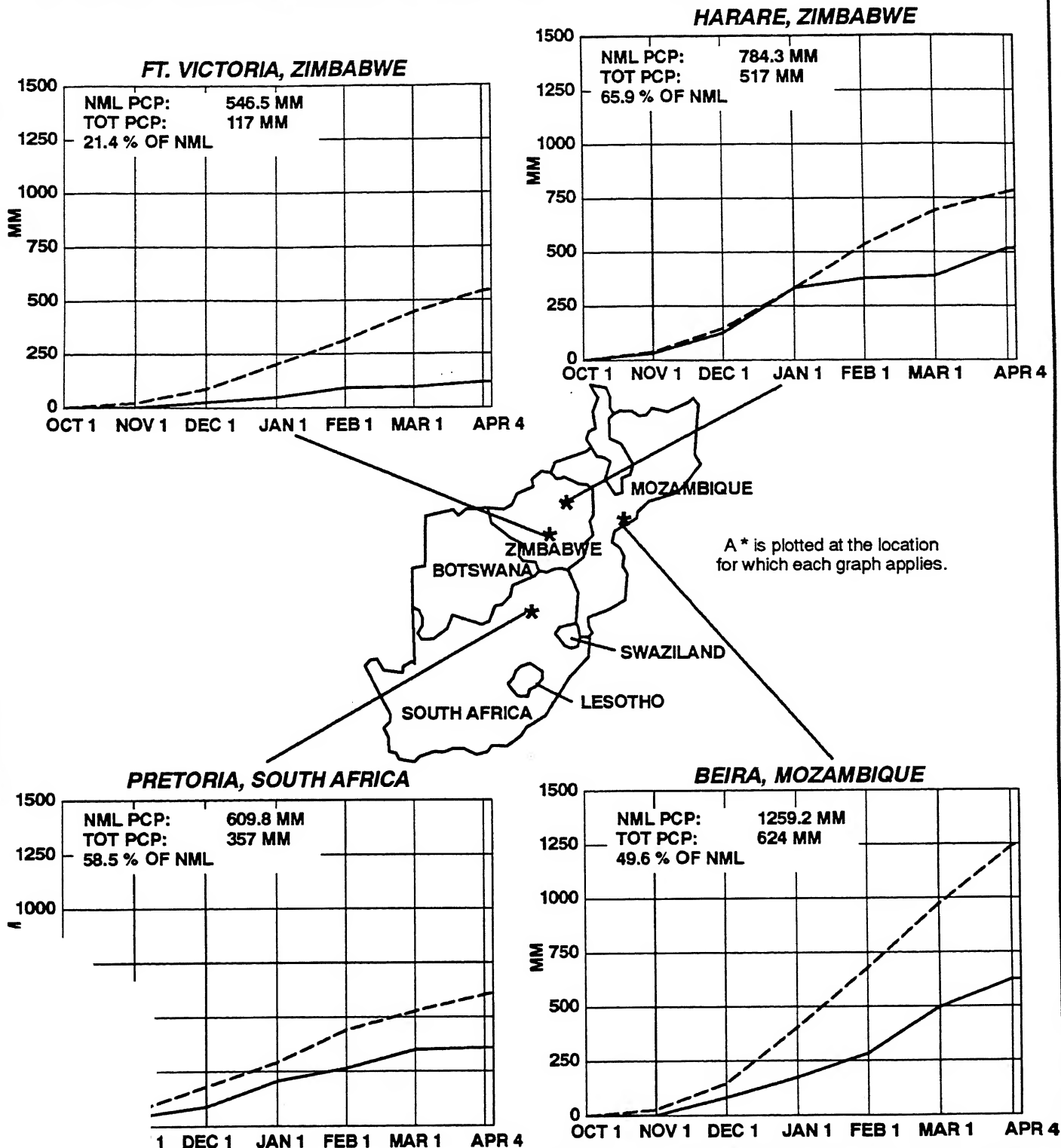
Subfreezing temperatures were observed in all but southern and western tiers of the United States. Readings fell below 20°F in the Great Lakes and Northern Great Plains, but remained above 0°F throughout the lower 48 states. (top). Temperatures remained above normal in the West, with daily records being established by the 80°F readings in Montana and Washington. Texas, the Desert Southwest, and portions of Oregon, Washington, Montana, South Dakota, California, and Florida also reported temperatures above 80°F (bottom).

EXTREME MAXIMUM TEMPERATURE (°F) **March 29 – April 4, 1992**



GLOBAL CLIMATE HIGHLIGHTS FEATURE

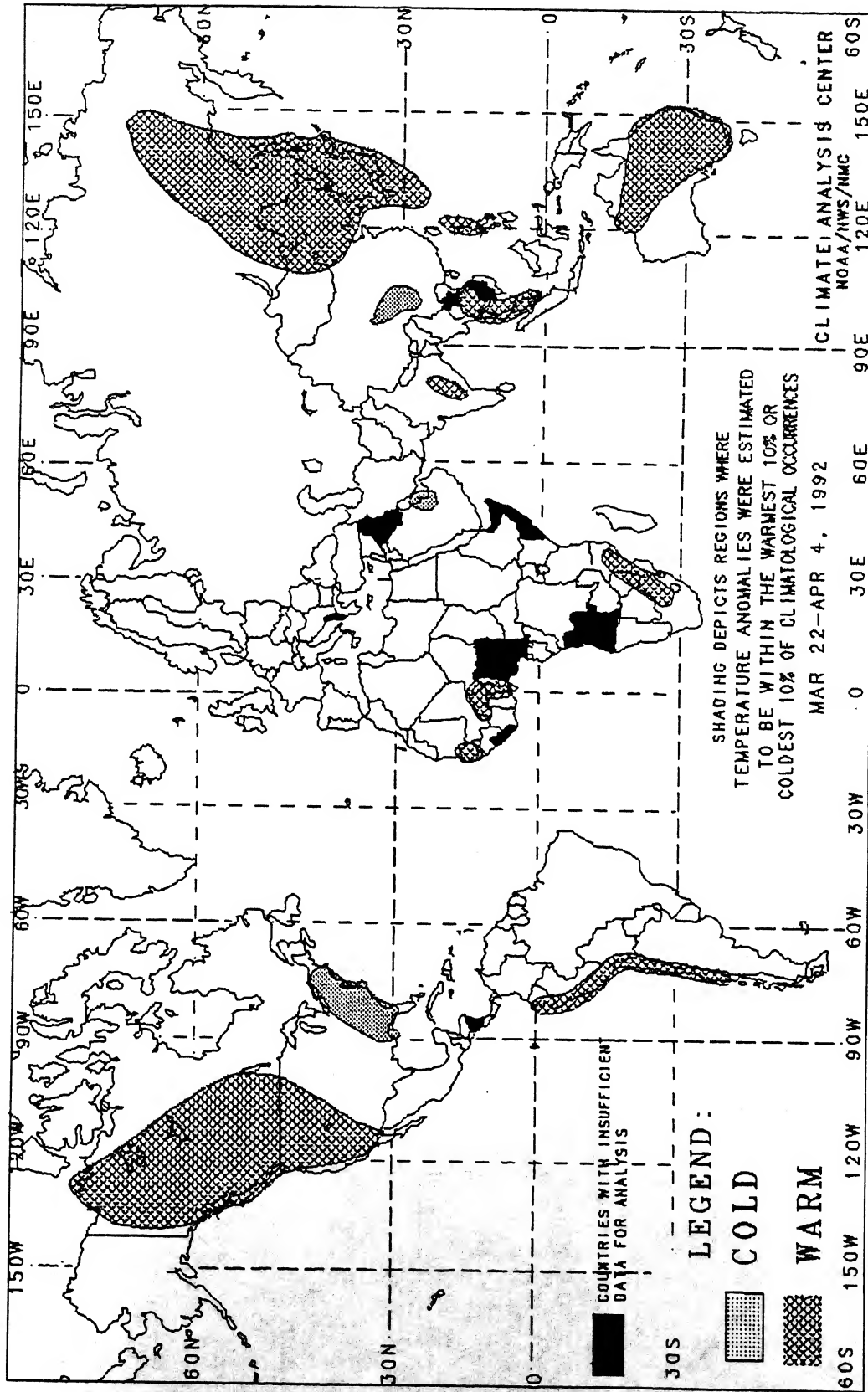
CUMULATIVE TOTAL (solid line) vs. NORMAL (dashed line) PRECIPITATION AT SELECTED LOCATIONS IN SOUTHERN AFRICA FOR OCTOBER 1, 1991 – APRIL 4, 1992



vere drought has plagued much of southern Africa throughout the 1991–1992 wet season, profoundly affecting this season's ion. Reliable data is somewhat lacking, but cumulative precipitation totals for the 1991–1992 wet season are compared to normal ularly reporting stations in the graphs above. Most locations from central South Africa northward across Swaziland, Botswana, , Malawi, and Mozambique recorded only 20–75% of normal amounts during October 1, 1991 – April, 4, 1992, which corresponds ormal November – May rainfall totals that are frequently observed during low-index (warm) ENSO episodes. A complete update n, South American, and Australian wet seasons will be printed in the Weekly Climate Bulletin within the next several weeks.

2-WEEK GLOBAL TEMPERATURE ANOMALIES

MARCH 22 - APRIL 4, 1992



The anomalies on this chart are based on approximately 2500 observing stations for which at least 13 days of temperature observations were received from synoptic reports. Many stations do not operate on a twenty-four hour basis so many night time observations are not taken. As a result of these missing observations the estimated minimum temperature may have a warm bias. This in turn may have resulted in an overestimation of the extent of some warm anomalies.

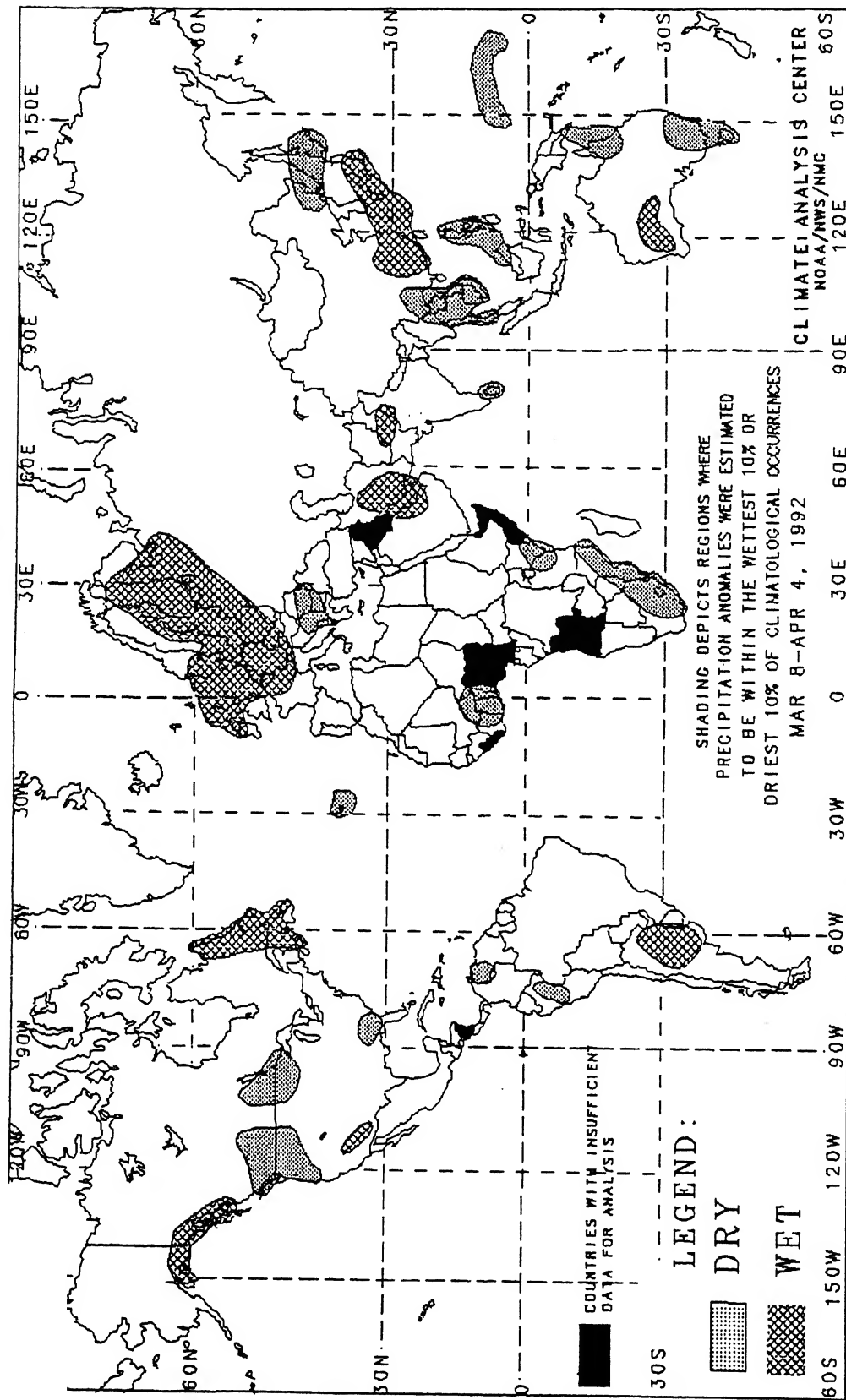
Temperature anomalies are not depicted unless the magnitude of temperature departures from normal exceeds 1.5°C.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

This chart shows general areas of two week temperature anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

4-WEEK GLOBAL PRECIPITATION ANOMALIES

MARCH 8 - APRIL 4, 1992



The anomalies on this chart are based on approximately 2500 observing stations for which at least 27 days of precipitation observations (including zero amounts) were received or estimated from synoptic reports. As a result of both missing observations and the use of estimates from synoptic reports (which are conservative), a dry bias in the total precipitation amount may exist for some stations used in this analysis. This in turn may have resulted in an overestimation of the extent of some dry anomalies.

In climatologically arid regions where normal precipitation for the four week period is less than 20 mm, dry anomalies are not depicted. Additionally, wet anomalies for such arid regions are not depicted unless the total four week precipitation exceeds 50 mm.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

The chart shows general areas of four week precipitation anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

UNITED STATES MONTHLY CLIMATE SUMMARY

MARCH 1992

March 1992 was the fourth consecutive month with well above normal temperatures nationally as most locations west of the Mississippi River were among the warmest 30% of the historical March temperature distribution. Only ten Marches since 1895 brought milder conditions to the nation as a whole, according to the National Climatic Data Center [NCDC] (pages 10 and 11). This month culminated the second warmest start to a year on record for the contiguous 48 states (front cover), and the mildest start on record for the Northern Great Plains Region (page 16). Despite the widespread warmth, New England and upstate New York endured a very wintry March as a series of high-pressure centers dove southward out of Canada and steered frigid Arctic air to the region. Farther south, the regular return of milder weather moderated the influence of the periodic Arctic outbreaks, resulting in near normal monthly mean temperatures. Excessive rains again plagued Texas, where excess moisture has been a chronic problem since May 1990, while abundant precipitation, with heavy snows in the higher elevations, added to California's water supplies, which had also increased during February.

Spring-like warmth prevailed across most of the country during the first week of March. More than 130 daily record highs were produced as temperatures soared into the eighties as far north as the central Plains and mid-Atlantic. The relatively tranquil and warm weather resulted from two domes of high pressure that dominated the East and Northwest. Strong thunderstorms, however, brought heavy rain, large hail, and tornadoes to the nation's midsection while up to eight inches of rain inundated already saturated southeastern Texas. According to press reports, resultant flooding caused more than 25 million dollars in damage around Houston, TX. In addition, a storm system dumped more rain on southern California while heavy snow fell in the mountains. Officials in Ventura and Santa Barbara counties declared the six-year drought over in those areas, although sizable long-term moisture shortages persisted farther north.

Conditions changed rapidly during the second week of March as a strong blast of frigid, Arctic air plunged through the central states to the Gulf and Atlantic coasts. Temperatures tumbled below zero from the upper Midwest to the Northeast while freezing conditions penetrated all the way to Florida. Strong wind gusts generated heavy lake effect snow squalls and bitterly cold wind chills across the Great Lakes and Northeast. Localized snowfall totals approaching forty inches were observed in western New York, with Palermo buried under seven feet. Severe weather developed in the mild air ahead of the Arctic outbreak as it surged across the central and southern United States. Violent thunderstorms raked the Great Plains with heavy rain, hail, and several tornadoes. The mild conditions combined with moderate rains to produce ice-jam flooding along the Winooski River. Up to four feet of water rushed through some streets in Montpelier, VT, extensively damaging numerous businesses, according to press reports. Excessive moisture was also a problem in southeastern Alaska, where nearly one and one-half feet of precipitation drenched Yakutat, AK.

A second blast of Arctic air brought more wintry weather to the eastern half of the country during the third week of the month. Nearly two dozen daily record lows were established from Maine to Florida. In sharp contrast, record-breaking warmth overspread the West as highs soared into the seventies as far north as Montana. Thunderstorms brought hail, damaging winds, and a few tornadoes to parts of the South and Southeast while beneficial precipitation again fell on California.

Winter retained its grip on the East, unusually warm weather dominated the Northwest, and violent thunderstorms battered the Deep South as March drew to a close. A late season snowstorm dumped more than a foot of snow on a swath from the Midwest northeastward through southern New England. Bradford, PA received nineteen inches of snow as strong winds piled two-foot drifts on parts of the eastern Great Lakes region. Syracuse, NY had received a record seasonal snowfall total of 162.2 inches by the end of the month. In sharp contrast, the northern Plains remained very warm as the mercury pushed into the seventies in parts of Montana and the Dakotas. More heavy rains caused additional flooding in southeastern Texas while flash flooding and landslides barraged parts of central and southern California. Meanwhile, strong thunderstorms pro-

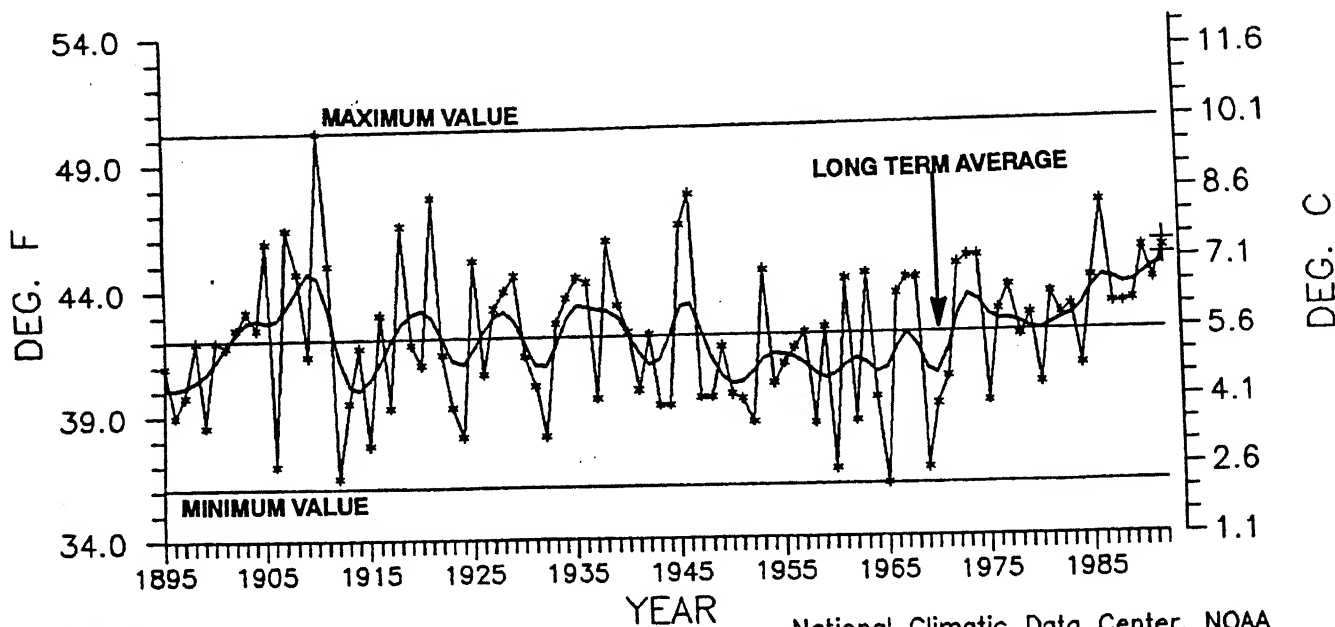
duced a severe hailstorm that caused approximately 60 million dollars in damage around Orlando, FL, which was that area's costliest natural disaster on record, according to press reports. Farther west, the wettest March on record in Las Vegas, NV (Table 5) was punctuated by a rare tornado that briefly touched down as the month ended.

According to the River Forecast Centers, heavy rains inundated an area from eastern Texas and Louisiana through much of the northern and southern tiers of Alabama, Mississippi, and Georgia. Five inch monthly totals were common, and several stations measured ten to fourteen inches (Table 1, Figures 1 and 2). In central and southern Texas, southeastern Alabama, and southern Georgia, this corresponded to 125 to 400% of normal, making March 1992 one of the wettest 30% of all Marches, based on the 1951-1980 distribution. Well above normal precipitation also fell on California and the Desert Southwest. Frequent storms delivered two to eight inches of rain to the region, with totals approaching fourteen inches in the higher elevations. Heavy snow in the Sierra Nevadas increased the snowpack considerably, adding to the water supply available for the region's upcoming dry summer months. In addition, above normal precipitation was measured in much of the central Plains, where many locations received three to six inches. Much of the Alaskan Panhandle received very heavy precipitation as Pacific storms trekked well north of their usual track. Two Alaskan locations joined two stations in the contiguous 48 states in reporting the wettest March on record (Table 5). Regionally, the Southwest experienced the third wettest March since 1895, and six of the nine regions, as defined by NCDC, observed above median totals, as did the country as a whole. A wet March aided Texas in recording its wettest January-March period on record while three other states had one of the ten wettest in the last 98 years (page 11).

In sharp contrast, less than half the normal precipitation totals were received in the Northwest, with March 1992 being the region's eighth driest March on record (Table 2, Figures 1 and 2). In the Southeast, precipitation was generally below normal in the interior while heavy rains soaked some of the fringes. Subnormal precipitation also fell on eastern Arkansas, parts of the Northeast, and most of Hawaii. Consistently below normal precipitation since the beginning of the year has caused two states along the immediate mid-Atlantic coast (Delaware and New Jersey) and three states across the northern Rockies and Intermountain West (Montana, Wyoming, and Idaho) to experience one of the ten driest starts to a year since 1895, according to NCDC.

The warm weather that dominated much of the country west of the Mississippi River generated departures of +7°F to +14°F across most of the West North Central and Northwest Regions, both of which had one of the four warmest Marches on record (Table 3, Figures 3 and 4). Farther west, parts of northern California and southern Oregon reported temperatures averaging as much as 6°F above normal while lesser positive monthly departures covered most other areas west of the Appalachians. Much of Alaska

U.S. NATIONAL TEMPERATURE MARCH, 1895-1992

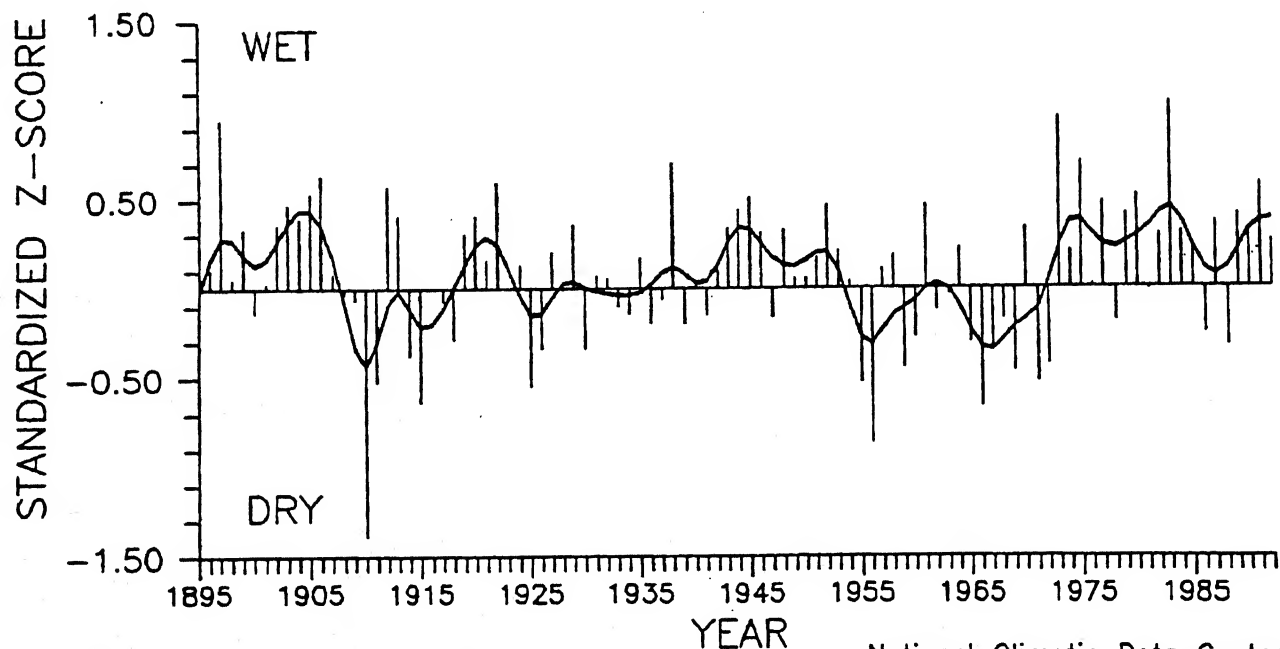


CONFIDENCE INTERVAL
FOR CURRENT YEAR IS
INDICATED BY '*'

National Climatic Data Center, NOAA

Nationally Averaged March Temperatures, as computed by the National Climatic Data Center. *Unseasonably mild weather west of the Appalachians more than compensated for the somewhat cooler than normal conditions along the Atlantic coast, making March 1992 the eighth consecutive March with above normal temperatures nationally.*

U.S. NATIONAL WEIGHTED MEAN PRECIPITATION INDEX MARCH, 1895-1992



National Climatic Data Center, NOAA

National Mean March Precipitation Index, as computed by the National Climatic Data Center. *March 1992 was the fourth successive such month featuring somewhat above normal precipitation.*

TEMPERATURE AND PRECIPITATION RANKINGS FOR MARCH 1992, BASED ON THE PERIOD 1895 TO 1992. 1 = DRIEST/COLDEST AND 98 = WETTEST/HOTTEST.

<u>REGION</u>	<u>PRECIPITATION</u>	<u>TEMPERATURE</u>
NORTHEAST	57	29
EAST NORTH CENTRAL	69	66
CENTRAL	47	63
SOUTHEAST	40	42
WEST NORTH CENTRAL	63	95
SOUTH	58	73
SOUTHWEST	95	81
NORTHWEST	8	97
WEST	76	88
NATIONAL	63	88

National Climatic Data Center

Top 10 rankings : **BOLD**

Bottom 10 rankings : *Italics*

PRECIPITATION RANKINGS FOR JAN-MAR 1992, BASED ON THE PERIOD 1895 TO 1990. 1 = DRIEST, 98 = WETTEST.

<u>STATE</u>	<u>RANK</u>	<u>STATE</u>	<u>RANK</u>	<u>STATE</u>	<u>RANK</u>	<u>STATE</u>	<u>RANK</u>
AL	70	IA	83	NE	92	RI	46
AZ	95	KS	83	NV	64	SC	49
AR	20	KY	25	NH	15	SD	68
CA	68	LA	90	<i>NJ</i>	5	TN	18
CO	80	ME	45	NM	70	TX	98
CT	28	MD	30	NY	43	UT	55
<i>DE</i>	4	MA	18	NC	44	VT	26
FL	67	MI	38	ND	43	VA	41
GA	55	MN	61	OH	17	WA	27
<i>ID</i>	3	MS	49	OK	29	WV	26
IL	31	MO	28	<i>OR</i>	4	WI	41
IN	17	<i>MT</i>	2	PA	25	WY	2

National Climatic Data Center

TABLE 1. SELECTED STATIONS WITH 150% OR MORE OF THE NORMAL PRECIPITATION AND 5.00 INCHES OR MORE PRECIPITATION; OR, STATIONS WITH 7.00 INCHES OR MORE PRECIPITATION AND NO NORMALS DURING MARCH 1992.

<u>STATION</u>	<u>TOTAL</u> (INCHES)	<u>PCT. OF</u> <u>NORMAL</u>	<u>STATION</u>	<u>TOTAL</u> (INCHES)	<u>PCT. OF</u> <u>NORMAL</u>
YAKUTAT, AK	37.31	390.7	SAN BERNARDINO/NORTON AFB, CA	6.56	237.7
CORDOVA/MILE 13, AK	12.90	236.3	HOUSTON, TX	6.30	236.8
DOTHAN, AL	10.04	***	BRADFORD, PA	6.28	182.6
VALDEZ, AK	9.94	231.7	SAN ANTONIO, TX	6.12	467.2
MCCOMB, MS	9.84	***	RICHMOND, VA	5.91	166.0
LITTLE ROCK AFB, AR	8.39	***	SHREVEPORT, LA	5.71	151.5
PINE BLUFF, AR	7.80	153.2	HARRISBURG, PA	5.39	154.0
CAPE HATTERAS, NC	7.75	196.2	LUFKIN, TX	5.30	156.8
MEMPHIS NAS, TN	7.74	***	TOPEKA, KS	5.29	241.6
LITTLE ROCK, AR	7.54	161.5	AUSTIN, TX	5.22	312.6
JUNEAU, AK	7.23	217.8	PATUXENT RIVER NAS, MD	5.11	152.1
NEW ORLEANS/LAKE FRONT, LA	7.03	***	LOS ANGELES, CA	5.08	290.3

NOTE: Stations without precipitation normals are indicated by asterisks.

PRECIPITATION PERCENTILES

1 MAR 92 THRU 31 MAR 92

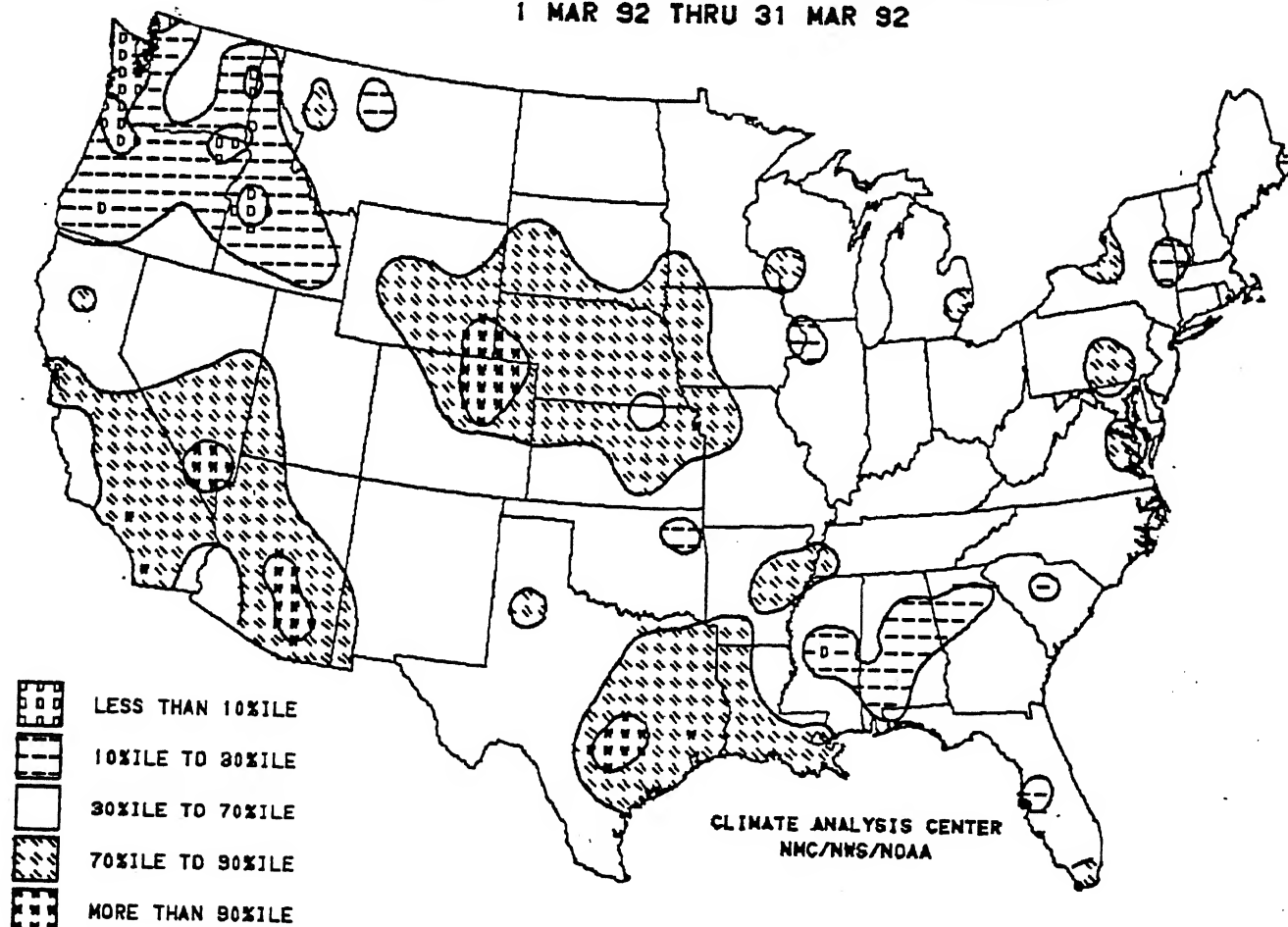


FIGURE 1. March 1992 Precipitation Percentiles. Very wet conditions (>70%ile) affected much of Texas and Louisiana for the fourth consecutive month. Other abnormally wet areas included the southern half of California, the Desert Southwest, and the central Plains. In contrast, significant March dryness (<30%ile) prevailed across the Northwest.

TABLE 2. SELECTED STATIONS WITH 70% OR LESS OF THE NORMAL PRECIPITATION AND NORMAL PRECIPITATION OF 2.25 INCHES OR MORE DURING APRIL 1992.

STATION	TOTAL (INCHES)	PCT. OF NORMAL	NORMAL (INCHES)	STATION	TOTAL (INCHES)	PCT. OF NORMAL	NORMAL (INCHES)
HONOLULU, OAHU, HI	0.66	19.1	3.46	SEATTLE-TACOMA, WA	1.76	49.3	3.57
STAMPEDE PASS, WA	0.85	9.6	8.88	QUILLAYUTE, WA	1.86	15.5	11.97
SALEM, OR	0.89	20.7	4.29	GLENS FALLS, NY	1.87	60.5	3.09
TAMPA, FL	0.95	27.6	3.44	PORTLAND, OR	1.87	52.1	3.59
VERO BEACH, FL	1.06	34.8	3.05	APALACHICOLA, FL	1.89	46.8	4.04
SEXTON SUMMIT, OR	1.09	27.1	4.02	UTICA, NY	2.01	59.6	3.37
ASTORIA, OR	1.19	16.5	7.21	EUGENE, OR	2.08	40.9	5.09
EASTPORT, ME	1.25	39.4	3.17	JACKSON, MS	2.12	38.1	5.56
TULSA, OK	1.37	43.9	3.12	SUMTER/SHAW AFB, SC	2.17	61.3	3.54
OLYMPIA, WA	1.39	28.7	4.85	FLORENCE, SC	2.18	52.3	4.17
VALPARAISO/EGLIN AFB, FL	1.57	28.5	5.51	TUSCALOOSA, AL	2.23	34.4	6.49
DANVILLE, VA	1.70	45.5	3.74	SPRINGFIELD, MO	2.25	65.4	3.44

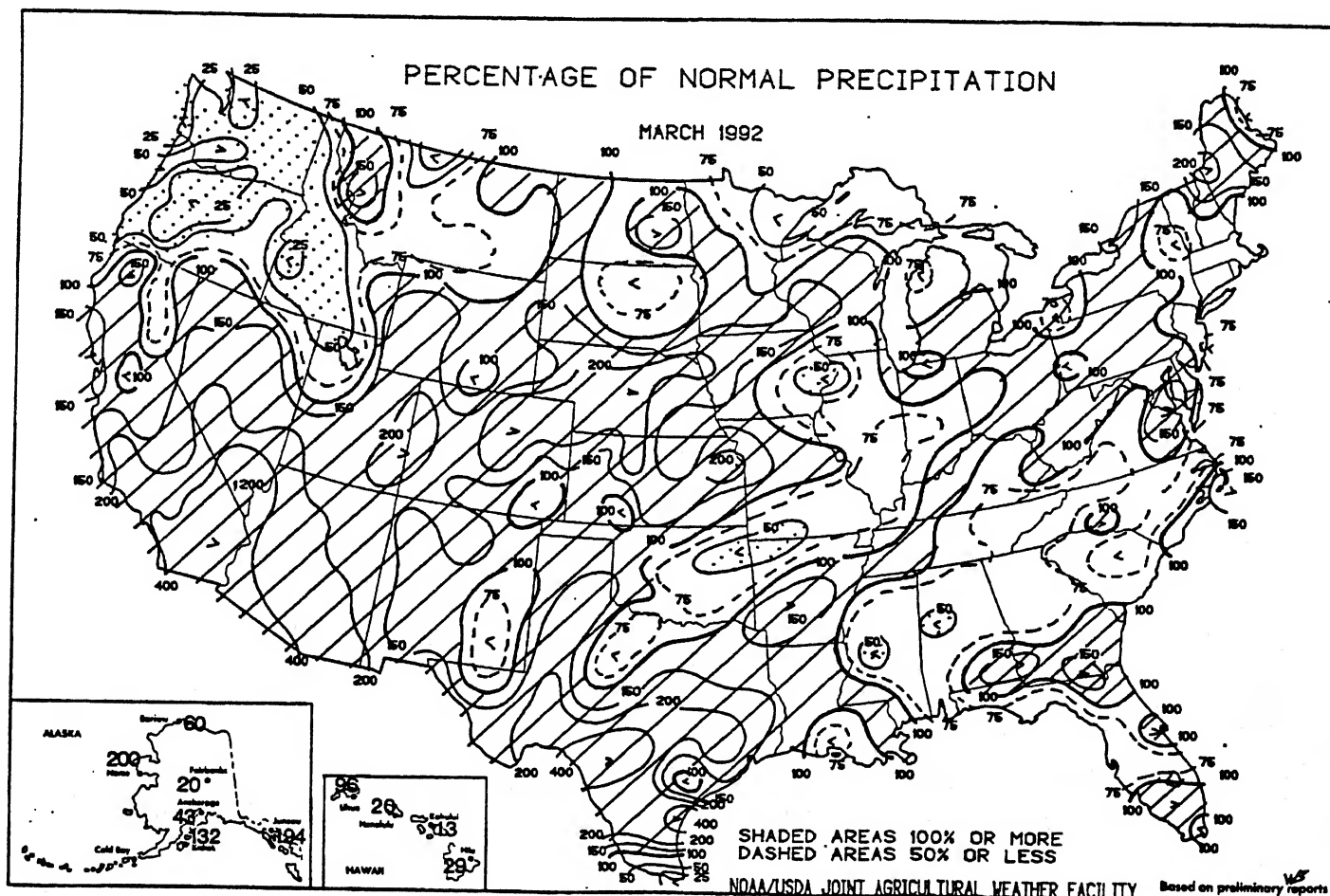
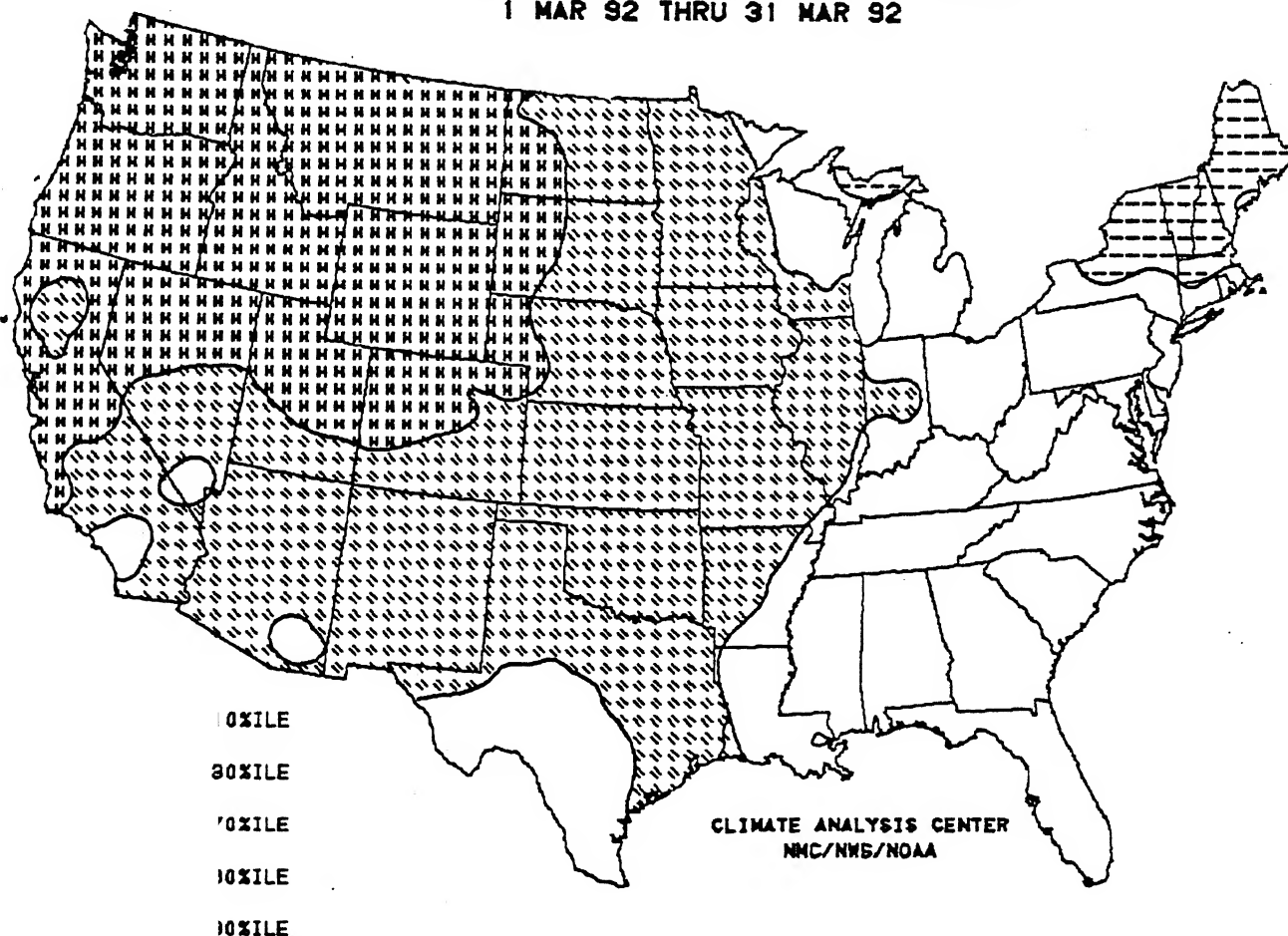


FIGURE 2. March 1992 Percent of Normal Precipitation. Isopleths drawn for 25%, 50%, 75%, 100%, 200%, and 400%. Two to four times the normal amounts soaked much of Texas, the Desert Southwest, and southern California. Most of Nebraska and northeastern Colorado also reported more than twice the usual total. Meanwhile, parts of the Pacific Northwest received less than one-quarter of normal March totals.

TABLE 3. MARCH 1992 AVERAGE TEMPERATURE 9.0°F OR MORE ABOVE NORMAL

<u>STATION</u>	<u>DEPARTURE</u>	<u>AVERAGE</u>	<u>STATION</u>	<u>DEPARTURE</u>	<u>AVERAGE</u>
	(°F)	(°F)		(°F)	(°F)
BOZEMAN, MT	+13.7	41.4	BILLINGS, MT	+10.3	44.1
BUTTE, MT	+12.6	38.8	WILLISTON, ND	+10.3	36.2
GLASGOW, MT	+11.7	39.4	BURLEY, ID	+9.8	47.4
LEWISTOWN, MT	+11.3	39.5	LANDER, WY	+9.8	41.8
SHERIDAN, WY	+11.1	43.1	DICKINSON, ND	+9.5	36.1
HELENA, MT	+11.0	42.8	GREAT FALLS, MT	+9.4	41.1
MILES CITY, MT	+10.9	42.1	WORLAND, WY	+9.3	42.6
STAMPEDE PASS, WA	+10.7	40.7	MINOT, ND	+9.3	33.5
CUT BANK, MT	+10.6	37.9	JAMESTOWN, ND	+9.2	33.5
IDAHO FALLS, ID	+10.5	42.9	MISSOULA, MT	+9.1	43.4
HAVRE, MT	+10.4	39.7			

TEMPERATURE PERCENTILES 1 MAR 92 THRU 31 MAR 92



March 1992 Temperature Percentiles. Warmer than usual conditions (>70%ile) dominated the Mississippi River to the Pacific Coast, with the northwestern quadrant of the nation ranked among the warmest of the historical distribution (>90%ile). Much of the East was near normal, but New England and New York were colder than normal (<30%ile).

TABLE 4. MARCH 1992 AVERAGE TEMPERATURE 2.5°F OR MORE BELOW NORMAL

<u>STATION</u>	<u>DEPARTURE</u>	<u>AVERAGE</u>	<u>STATION</u>	<u>DEPARTURE</u>	<u>AVERAGE</u>
	(°F)	(°F)		(°F)	(°F)
MASSENA, NY	-5.6	22.7	ROCHESTER, NY	-3.1	30.1
UTICA, NY	-4.4	26.9	GAINESVILLE, FL	-3.0	60.8
KOTZEBUE, AK	-4.3	-4.5	WORCESTER, MA	-2.9	30.2
CARIBOU, ME	-4.1	20.3	ST PAUL ISLAND, AK	-2.8	20.9
SYRACUSE, NY	-3.9	29.3	GLENS FALLS, NY	-2.8	28.8
MT WASHINGTON, NH	-3.8	8.4	POUGHKEEPSIE, NY	-2.8	33.3
EASTPORT, ME	-3.7	27.9	WAYCROSS, GA	-2.8	58.5
HOULTON, ME	-3.6	21.8	BOSTON/LOGAN, MA	-2.7	35.3
MONTPELIER, VT	-3.2	24.7	SAULT STE MARIE, MI	-2.6	21.5
ROME/GRIFFISS AFB, NY	-3.2	27.1	ELMIRA/CHEMUNG CO, NY	-2.6	31.0
BURLINGTON, VT	-3.1	26.3			

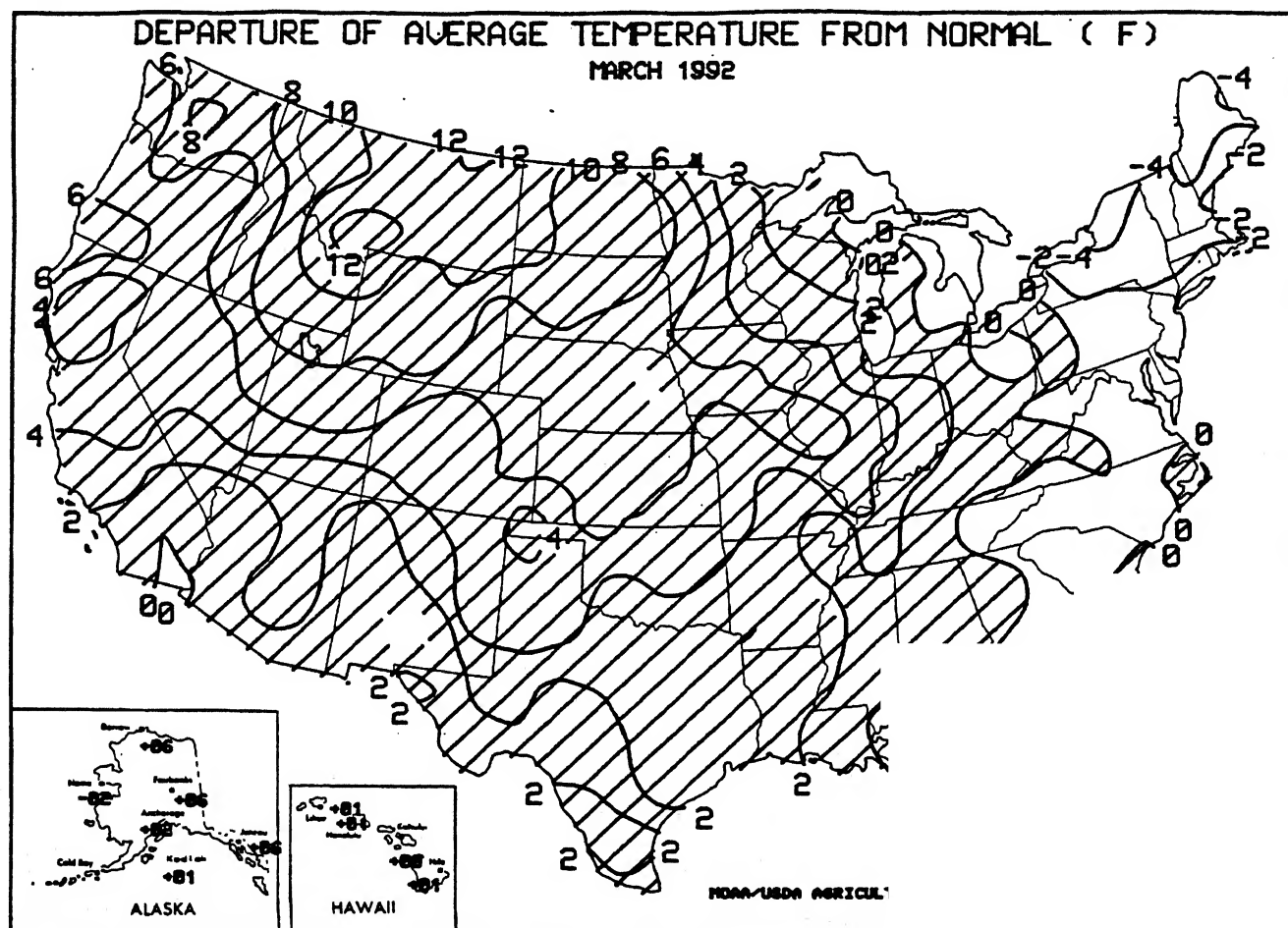


FIGURE 4. March 1992 Departure of Average Temperature from normal for -4°F, -2°F, 0°F, +2°F, +4°F, +6°F, +8°F, +10°F, and +12°F. *0* York reported widespread below normal temperatures. Very warm weather reported in the Appalachians to the Pacific, with the greatest departures (over +8°F) recorded in the Plains for the fourth consecutive month.

TABLE 5. RECORD MARCH PRECIPITATION.

<u>STATION</u>	<u>TOTAL</u> (INCHES)	<u>NORMAL</u> (INCHES)	<u>PCT. OF</u> <u>NORMAL</u>	<u>RECORD</u> <u>TYPE</u>	<u>RECORDS</u> <u>BEGAN</u>
<i>NOTE: Trace precipitation is considered ZERO precipitation. Stations with no precipitation are only included if normal precipitation is 0.25 inches or more.</i>					
YAKUTAT, AK	37.31	9.55	390.7	HIGHEST	1941
CORDOVA, AK	12.90	5.46	236.3	HIGHEST	1942
SAN ANTONIO, TX	6.12	1.31	467.2	HIGHEST	1940
LAS VEGAS, NV	4.80	0.39	1230.8	HIGHEST	1937
QUILLAYUTE, WA	1.84	7.56	24.3	LOWEST	1966

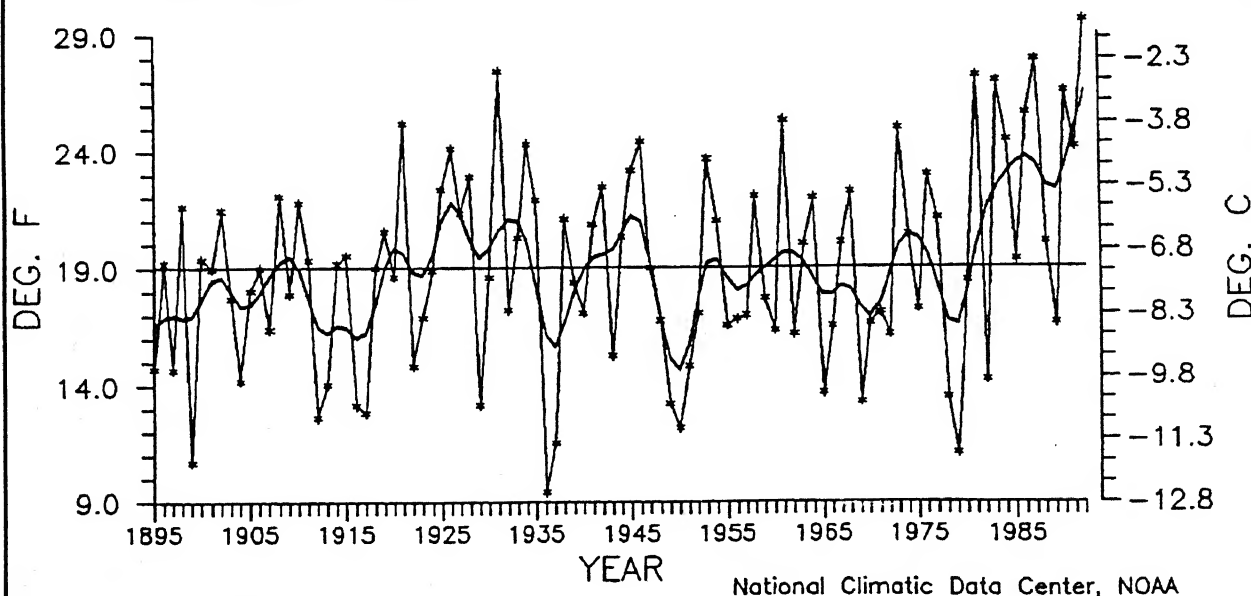
TABLE 6. RECORD MARCH AVERAGE TEMPERATURES.

<u>STATION</u>	<u>DEPARTURE</u> (°F)	<u>AVERAGE</u> (°F)	<u>NORMAL</u> (°F)	<u>RECORD</u> <u>TYPE</u>	<u>RECORDS</u> <u>BEGAN</u>
MISSOULA, MT	+9.2	43.5	34.3	HIGHEST	1947
KALISPELL, MT	+9.0	41.2	32.2	HIGHEST	1951
POCATELLO, ID	+6.8	42.4	35.6	HIGHEST	1947
MEDFORD, OR	+6.7	52.2	45.5	HIGHEST	1947
LEWISTON, ID	+6.7	49.5	42.8	HIGHEST	1951
EUREKA, CA	+6.3	54.5	48.2	HIGHEST	1886
SEATTLE-TACOMA, WA	+6.3	50.5	44.2	HIGHEST	1947
SALEM, OR	+6.1	50.9	44.8	HIGHEST	1951
QUILLAYUTE, WA	+5.9	48.7	42.8	HIGHEST	1966
OLYMPIA, WA	+5.4	48.2	42.8	HIGHEST	1951

TABLE 7. RECORD MARCH EXTREME TEMPERATURES.

<u>STATION</u>	<u>EXTREME</u> (°F)	<u>DATE</u>	<u>RECORD</u> <u>TYPE</u>	<u>RECORDS</u> <u>BEGAN</u>
CARIBOU, ME	-21	MAR 2	LOWEST	1939

**NORTHERN GREAT PLAINS TEMPERATURE
JAN-MAR, 1895-1992**



Northern Great Plains Temperature during January - March 1895 - 1992, as computed by the National Climatic Data Center. The first three months of 1992 comprised the mildest start to a year on record in the Northern Great Plains as temperatures averaged more than 10°F above normal. Seven of the last ten January-March periods averaged at least 5°F above normal in the region, pushing the long-term, filtered trend (smooth line) to unprecedented levels.

